Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

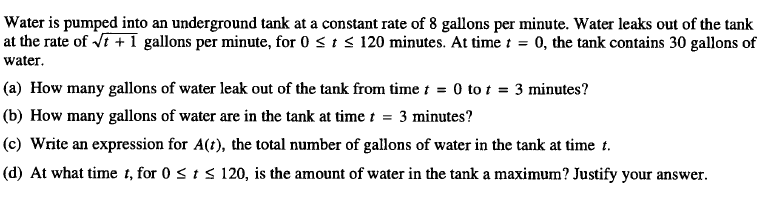
Calculus – Integral Accumulation Problems

Multiple Choice:





Free Response – Real Life Application “In-Flow, Out-Flow” Problem



|  |  |
| --- | --- |
| Communicating what we know about: The Definite Integral (FTOC pt. 1) | |
| Equations | Table(s) |
| Use the Fundamental Theorem of Calculus to SET UP and EVALUATE a definite integral that will give the area between f(x) and the x-axis from 0 to 4. | Fill in the table below and use it do a LEFT Riemann sum with four equal subintervals to approximate the area under f(x)   |  |  | | --- | --- | |  | f(x) | | 0 |  | | 1 |  | | 2 |  | | 3 |  | | 4 |  | |
| Graphs | Communicate |
| a.) Graph f(x)  b.) Draw in the rectangles for your left Riemann sum.  c.) Shade the area under the curve. | 1. Explain what the definite integral of f(x) from 0 to 4 tells us. 2. If f(x) represented a velocity function, what would the definite integral from part 1 tell us? 3. If f(x) represented an acceleration function, what would the definite integral from part 1 tell us? |